

## **MONTANA FISH, WILDLIFE & PARKS FINAL PROJECT PERFORMANCE REPORT**

**AGREEMENT:** T - 12 - 1  
**GRANT TITLE:** Status & Distribution of Sagebrush and Grassland  
Associated Animals  
**PERIOD COVERED:** September 5, 2003 through June 30, 2005

### **Objective**

To document the distribution, abundance, range, status and associated habitats for sagebrush and grassland-associated birds and small mammals throughout Montana.

### **Location**

Surveys for sagebrush associated small mammals will take place in four focus regions in Montana:

- Southwest Montana – sage habitats in the Beaverhead/Big Hole drainages
- Southcentral Montana – sage habitats in the Red Lodge/Pryor Mountain area
- Southeastern Montana – sage habitats in the Miles City area, and
- Northcentral Montana – sage habitats in south Valley County.

Grassland bird point counts will be conducted on private and public land in Blaine and Phillips Counties.

### **Accomplishments**

Small mammal surveys were conducted in sage-dominated habitats in Beaverhead, Carbon, Custer, Garfield, Petroleum, Powder River, Powell, Prairie, and Valley counties. This project was designed to provide information on the distribution of 4 small mammal species deemed “of concern” in Montana (Preble’s shrew, dwarf shrew, Merriam’s shrew and Great Basin pocket mouse). During the 2003 and 2004 field seasons, a cumulative total of 977 small mammals comprising 9 species were captured during the course of 8,160 bait trap-nights and 674 pitfall trap nights. Nearly 95% of the individuals captured were deer mice (*Peromyscus maniculatus*). The other 8 species captured included least chipmunk (*Tamias minimus*), Ord’s kangaroo rat (*Dipodomys ordi*), olive-backed pocket mouse (*Perognathus fasciatus*), montane vole (*Microtus montanus*), meadow vole *Microtus pennsylvanicus*, sagebrush vole (*Lemniscus curtatus*), Merriam’s shrew (*Sorex Merriami*), montane (or dusky) shrew (*Sorex monticolus*) and an unidentified shrew. Previously, only 9 Merriam’s shrews had ever been collected in the state. One of the 3 Merriam’s shrew specimens collected during this study represents a new record for Powder River County. Both montane (or dusky) shrew specimens represent new occurrence records for Valley and Garfield Counties.

Aerial surveys were conducted in southeastern Montana to document locations of black-tailed prairie dog and surveys were conducted in Carbon county to identify white-tailed prairie dog colonies. During 135 hours of aerial survey effort, 1,790 black-tailed prairie dog colonies were

located (45% estimated to be less than 10 acres in size; fewer than 2% larger than 320 acres in size). The total acreage of black-tailed prairie dog colonies observed during this survey was estimated to be 89,863, which approaches the most recent estimate of 90,000 acres occupied by black-tailed prairie dogs in Montana. Even though ocular acreage estimates are not precise, this information combined with the extensive experience of the observer and pilot, indicate that total prairie dog acreage in Montana is likely greater now than at the time of the last statewide prairie dog survey during 1996-98. Seven previously unknown white-tailed prairie dog colonies were identified in S. Carbon County. These sites will be ground-truthed to determine whether they are currently active.

A total of 102 bird point counts were conducted to survey grassland birds in Blaine County, Montana. Of the 52 bird species recorded on the Gordon ranch, on which FWP has a conservation easement, 11 are deemed “of concern” in Montana (Baird’s sparrow, Brewer’s sparrow, burrowing owl, chestnut-collared longspur, Franklin’s gull, lark bunting, loggerhead shrike, long-billed curlew, McCown’s longspur, Sprague’s pipit, and Swainson’s hawk). Direct evidence of breeding (discovery of active nests) was confirmed for chestnut-collared longspur, cliff swallow, horned lark, McCown’s longspur, northern shoveler, red-winged blackbird, Swainson’s hawk, sharp-tailed grouse, vesper sparrow, and willet.

Thirty-eight bird species were encountered in “rested” pastures, including 8 species “of concern” in Montana (chestnut-collared longspur, Sprague’s pipit, Baird’s sparrow, McCown’s longspur, lark bunting, Brewer’s sparrow, Franklin’s gull, and long-billed curlew). The 14 species specific to “rested” pastures included the American coot, Brewer’s sparrow, California gull, cliff swallow, common tern, eared grebe, Franklin’s gull, gadwall, northern shoveler, ring-billed gull, ruddy duck, sharp-tailed grouse, and short-eared owl. Twenty-four species recorded during point counts were encountered at both “rested” and “grazed” sites.

Thirty bird species were documented on the “grazed” pasture, 7 of which are species “of concern” in Montana (chestnut-collared longspur, McCown’s longspur, Baird’s sparrow, Sprague’s pipit, lark bunting, long-billed curlew, and Swainson’s hawk). The 6 species specific to the grazed sites included the American avocet, American crow, eastern kingbird, least flycatcher, northern pintail, and Swainson’s hawk.

Surveys were conducted at 62 sites in Sheridan, Roosevelt and Daniels counties to document distribution of four bird species “of concern” that occur in northeastern Montana (yellow rail, sedge wren, Nelson’s sharp-tailed sparrow, and LeConte’s sparrow). No yellow rails were encountered but a sedge wren was documented at 1 survey site, Nelson’s sharp-tailed sparrows at 31 sites, and LeConte’s sparrow at 5 sites. In addition, 17 additional species “of concern” in Montana were identified: 15 bird species (Baird’s sparrow, grasshopper sparrow, Sprague’s pipit, black tern, bobolink, chestnut-collared longspur, American white pelican, lark bunting, Franklin’s gull, American bittern, piping plover, white-faced ibis, orchard oriole, common tern, and Forster’s tern) as well as a northern leopard frog and smooth green snake.

Collectively, the above surveys improved our knowledge of the occurrence and distribution of wildlife species associated with sagebrush and grassland habitats by filling “holes” in statewide databases. New information is particularly important in the case of species designated “of

concern” in Montana. In the case of several species targeted by these surveys (Preble’s shrew, dwarf shrew, Great Basin pocket mouse, yellow rails, sedge wrens, and white-tailed prairie dogs), perceived rarity and/or localized distribution was verified and survey results yielded information that can be used to bolster future survey efforts for these species. Point locations recorded for new or recovered black-tailed prairie dog colonies will assist establishment of a statewide monitoring program to monitor Montana’s black-tailed prairie dog population.

### **Variances**

The cost of the small mammal trapping portion turned out to be less than projected. Remaining funds were devoted to surveying prairie dogs, which addressed another high priority survey and inventory need for sagebrush and grassland associated small mammal species.

### **Expenditure Recap:**

Proposed:

	Federal Share		Match		Total
Direct Costs	63,092.00		25,236.80		88,328.80
Indirect @ 20%	12,618.40				12,618.40
Total	75,710.40	75.00%	25,236.80	25.00%	100,947.20

Actual:

	Federal Share		Match		Total
Direct Costs	60,801.03		23,885.00		84,686.03
Indirect	10,865.14				10,865.14
Total	71,666.17	75.00%	23,885.00	25.00%	95,551.17

### **Project Personnel**

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